REMARKS

Claims 1-18 have been examined and have been rejected under 35 U.S.C. §102(b).

I. Rejections under 35 U.S.C. §102(b)

The Examiner has rejected claims 1-18 under 35 U.S.C. §102(b) as allegedly being anticipated by Kim (GB 2328825).

A. Claim 1

Applicant submits that claim 1 is patentable over the cited reference. For example, claim 1 recites, "a storage device which holds the decoded image information."

The Examiner maintains that figure 1 of Kim shows that data from the decoding unit 130 is transferred to the storage unit 160 and vice versa as indicated by the arrow. The Examiner therefore maintains that it is inherent that the data is extracted from the decoding unit 130 to the storage unit 160.

Applicant respectfully traverses the Examiner's position. In particular, Figure 1 of Kim merely shows that the network interface 120, the decoding unit 130, the interactive operator 150 and the storage 160 are connected to a system bus indicated by a center line. The arrows between those units and the center line merely show that those units can output data through the system bus and input data through the system bus. Data flows are controlled by a microprocessor (pg. 6, lines 20-22). If it is inherent that data is extracted from the decoding unit to the storage unit, since the double-headed arrows are added to the decoding unit 130 and the storage 160, then the decoded data output from the decoding unit 130 would be transferred to the

video server 110 through the network interface 120. Applicant submits, however, that this situation does not occur.

In lines 8-14 of page 6 of Kim, the reference discloses:

> The decoding unit 130 receives bit streams which have been encoded and compressed after the MPEG (Motion Picture Expert Group) standard and decodes the bit streams. The encoded bit streams are transferred from the video server 110 through the network interface unit 120 in case of a conventional playback mode; and from the storage unit 160 in case of a repetitive replay mode. (emphasis added)

In the underlined part above, Kim discloses that the encoded bit stream is output from the storage unit 160 in case of a repetitive playback mode and output from the video server 110 in case of a conventional playback mode. In other words, the output from the storage unit 160 is executed only in the repetitive replay mode. The underlined part also states that the bit stream output from the storage unit 160 is the encoded bit stream. In other words, what is stored in the storage unit 160 is the *encoded* bit stream, but not a *decoded* bit stream. Therefore, data from the decoding unit 130 is not transferred to the storage unit 160 because the data from the decoding unit 130 *is* the decoded bit stream. If the decoded bit stream is stored in the storage 160, the storage 160 has to include an encoding unit since what it is output from the storage 160 is the encoded bit stream. Even if the storage 160 includes the encoding unit, it would be unnecessary to encode the decoded bit stream in a case of repetitive replay mode. Applicant submits that such a process would be useless.

Furthermore, in line 25, page 6 through line 2, page 7 of Kim, the reference discloses, "[w]hile the bit stream of the requested video are received from the video server 110, the

interactive operator 150 stores the bit streams into the storage unit 160." Such disclosure clearly shows that the information input into the storage unit 160 is the encoded bit stream, not the decoded bit stream. In lines 7-12 of page 7 of Kim, the reference discloses that, "the interactive operator 150 stop storing the bit streams into the storage unit 160 and retrieves the bit streams corresponding to the latest portion to be replayed that is stored in the storage unit 160 to thereby provide them to the decoding unit 130." Such disclosure clearly shows that the interactive operator 160 retrieves the encoded bit streams from the storage unit 160 and provides them to the decoding unit 130 for the repetitive replay mode. The bit streams retrieved from the storage unit 160 are the encoded bit streams, not the decoded bit streams.

In line 15, page 7 through line 1, page 8, Kim clearly describes that a small amount of the encoded bit streams are stored in the storage unit 160. Applicant submits that there is no capacity for the decoded bit streams in the storage unit 160. Finally, in line 25, page 9 through line 4, page 10, Kim discloses, "[t]hen the interactive operator extracts the bit streams stored in the storage unit 160 at step S25. At step S26, the decoding unit 130 group start codes, ...picture coding type of each picture in a group by reading the bit stream from the storage unit 160 to thereby detect the number of pictures in the bit stream and ...." Applicant submits that such disclosure clearly states that the decoding unit 130 reads the bit streams from the storage unit 160 and decodes them, but does not write the decoded bit stream in the storage unit 160.

In view of the above, Applicant submits that Kim fails to teach or suggest storage of decoded image information.

Claim 1 also recites, "a repetitive reproduction controlling device which controls a repetitive reproduction processing."

The Examiner maintains that in claim 1, parts (f) and (g) of Kim, the reference teaches that the stored bit streams corresponding to the repetitive interval is replayed as many times as the number of repetitions requested, and resumes playback of the video. Applicant respectfully traverses the Examiner's position. For example, step (f) of claim 1 recites, "replaying the stored bit streams corresponding to the repetition interval as many times as the number of repetitions requested." The details of step (f) are disclosed in claim 6, where claim 6 clearly discloses that step (f) includes the step f2 of retrieving the stored bit streams and step f3 of decoding the bit streams corresponding to the repetition interval. Thus, it is clear that the "stored" bit streams are the "encoded" bit streams.

Further, in line 26 of page 7 through line 1 of page 8, Kim discloses that the latest bit streams of the predetermined time are stored in the storage unit 160, where the bit streams are the encoded bit streams. In line 26, page 9 through line 4, page 10 of Kim, it is clearly described that the decoding unit 130 reads the encoded bit streams from the storage unit 160 in the repetitive replay mode. Finally, on page 11, lines 4-7, Kim discloses, "[m]eanwhile, the interactive operator 150 detects the latest portion to be repeated by analyzing the command demanding for the repetitive replay mode and informs the decoder 130 how many pictures to be decoded how many times." (emphasis added). Such portion clearly shows that the decoding unit 130 is instructed to decode the encoded bit streams as many times as the number of repetitions

requested. On the other hand, in the present invention, the decoded image information is used for the repetitive reproduction. Therefore, the decoding is not repeatedly executed.

At least based on the foregoing, Applicant submits that Kim fails to disclose the claimed repetitive reproduction controlling device, as recited in claim 1.

Further, claim 1 recites, "wherein the output controlling device maintains the decoded image information in the repetition reproduction range in the storage device even when the decoded image information in the repetition reproduction range has been outputted."

In Kim, after the pictures decoded by the decoder 130 are outputted, the decoded pictures are not stored in the storage unit 160. Kim repeatedly decodes the stored bit streams corresponding to the repetition interval as many times as the number of repetitions requested. That is, once the decoded pictures are outputted, they are not used for the repetition reproduction. On the other hand, in the present invention, the output controlling device maintains the decoded image information in the repetition reproduction range in the storage device even when the decoded image information in the repetition reproduction range has been outputted. Therefore, it is possible to quickly reproduce image information in the repetition reproduction range since the image information has already been decoded and stored in the storage device. Further, while the repetition reproduction is conducted, the image information subsequent to the repetition reproduction range is decoded and stored in the storage device. As a result, after the repetition reproduction is finished, the reproduction is conducted continuously without any delay.

At least based on the foregoing, Applicant submits that claim 1 is patentable over the cited reference.

B. Claims 2-4 and 10-12

Since claims 2-4 and 10-12 are dependent upon claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

C. Claims 5, 17 and 18

Since claims 5, 17 and 18 contain features that are analogous to the features discussed above for claim 1, Applicant submits that claims 5, 17 and 18 are patentable over Kim for at least analogous reasons as claim 1.

D. Claims 6-9 and 13-16

Since claims 6-9 and 13-16 are dependent upon claim 5, Applicant submits that such claims are patentable at least by virtue of their dependency.

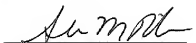
II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,



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